

1. An adhesive applicator for applying a strip of double-sided pressure sensitive adhesive to a surface of a cutting tape traveling through an elongated track, said applicator comprising a housing having an upper portion and a lower portion, a rotatable spindle for receiving a supply roll having layers of spaced strips with exposed face sides and unexposed back sides with each side having a pressure sensitive adhesive thereon and with back sides being adhered to an elongated continuous release liner, said spindle being positioned generally medially of said upper portion, a stationary nose member mounted to said housing and having a rounded tip exposed outwardly of said housing and being disposed at a proximal end of said upper portion of said housing above said spindle and any supply roll disposable thereon, a press member positioned diametrically opposite and above said rounded tip and being vertically movable downwardly to force an exposed face side of an adhesive strip on said rounded tip into contact with a lower surface of a generally horizontally incoming cutting tape to cause an exposed face side to adhere to a lower surface of a cutting tape and separate from a release liner when a release liner rotates around said tip.

2. The applicator of Claim 1 further including a rotatable nip roll spacedly positioned beneath a supply roll for pressing spent release liner onto a supply roll, a doctor knife edge positioned spacedly and adjacent said nip roll and beneath said supply roll for separating spent release liner from exposed face sides of strips around a supply roll while said nip roll presses against a supply roll.

3. The applicator of Claim 2 further including a waste channel formed in a space between said doctor knife edge and said nip roll for receiving spent release liner and sending it to a waste zone.

4. The applicator of Claim 2 further including means for urging said doctor knife edge and said nip roll upwardly to press against spent release liner onto a supply roll to aid rotation of a supply roll and to enable said doctor knife edge to separate a spent release liner from exposed face sides of strips around a supply roll and to accommodate for the decrease in diameter of a supply roll due to dispensing of strips and spent release liner.
5. The applicator of Claim 1 further including in combination a main driving roll of an apparatus for spooling and cutting a web of paper for forwarding generally horizontally incoming cuttings tape.
6. The applicator of Claim 1 further including in combination an optical sensor positioned in proximity with said stationary nose member for detecting presence or absence of adhesive on a lower surface of a generally horizontally exiting cutting tape, an upwardly movable abort block means positioned adjacent said track, and a control for receiving output signals from said sensor and sending a signal to said abort block means to move upwardly to divert a cutting tape having no adhesive strip on its lower surface.
7. The applicator of Claim 1 wherein said press member is a rotatable press roll.
8. The applicator of Claim 7 further including in combination an optical sensor for controlling the movement of said press roll downwardly to press into contact a lower surface of a cutting tape with an exposed face side of an adhesive strip.
9. In an apparatus for cutting a moving web of paper being wound on a spool and transferring that web onto an empty spool by attaching a cutting tape to an empty spool, said apparatus comprising an elongated fixed support extending behind side edges of a web, an elongated track having opposite open ends adjacent side edges of a web, a main driving roll for forwarding a cutting tape into an adjacent one said open and exiting out of another remote said open end, an adhesive applicator for applying a strip of double-sided pressure sensitive adhesive to a cutting tape

lower surface before entering said one adjacent open end, said applicator including a housing having an upper portion and a lower portion, a rotatable supply roll having layers of spaced strips with exposed face sides and unexposed back sides with each side having a pressure sensitive adhesive thereon and back sides being adhered to an elongated continuous release liner, said supply roll being positioned generally medially of said upper portion and, a stationary nose member mounted to said housing and having a rounded tip exposed outwardly of said housing and being disposed at a proximal end of said upper portion of said housing above said supply roll, press member positioned diametrically opposite and above said rounded tip and being vertically movable downwardly to force an exposed face side of an adhesive strip on said rounded tip into contact with a lower surface of a generally horizontally incoming cutting tape to cause an exposed face side to adhere to a lower surface of a cutting tape and separate from a release liner when a release liner rotates around said tip.

10. In the apparatus of Claim 9 further including a rotatable nip roll spacedly positioned beneath said supply roll for pressing spent release liner onto said supply roll, a doctor knife edge positioned spacedly and adjacent said nip roll and beneath said supply roll for separating spent release liner from exposed face sides of strips around said supply roll while said nip roll presses against said supply roll.

11. In the apparatus of Claim 9 further including an optical sensor mechanism positioned outside said housing in proximity with and upstream from said nose member and adjacent said track for detecting movement of an incoming cutting tape and signaling said press member to move downwardly to press a lower surface of incoming cutting tape into contact with an exposed face side of an adhesive strip.

12. In the apparatus of Claim 9 further including an optical sensor mechanism positioned in proximity with and downstream from said stationary nose member for detecting

presence or absence of adhesive on a lower surface of a generally horizontally exiting cutting tape and for aborting an exiting cutting tape when said sensor detects absence of adhesive strip.

13. In the apparatus of Claim 9 further including a brake section mounted on said track spacedly downstream of said sensor for frictionally engaging a cutting tape to assist in controlling its releasing movement from said track.

14. In the apparatus of Claim 9 further including a curved section positioned at said another remote open end of said track having a configuration for receiving a cutting tape from said brake section and inverting it to position a pressure sensitive adhesive on a lower surface of a cutting tape upwardly and to be fed to a nip formed between an empty spool and a web driving spool, and said curved section having a supporting member for said section.

15. The applicator of Claim 9 wherein said press member is a rotatable press roll.

16. In the apparatus of Claim 9 wherein said applicator further includes a waste channel formed in a space between said doctor knife edge and said nip roll for receiving spent release liner and sending it to a waste zone.

17. In the apparatus of Claim 9 wherein said applicator further includes means for urging said doctor knife edge and said nip roll upwardly to press spent release liner onto said supply roll to enable said doctor knife edge to separate spent release liner from exposed face sides of strip around said supply roll.

18. An adhesive applicator for applying a strip of double-sided pressure sensitive adhesive to a cutting tape surface, said apparatus comprising a housing having an upper portion and a lower portion, a rotatable supply roll having layers of spaced strips with exposed face sides and unexposed back sides with each side having a pressure sensitive adhesive thereon, said back side being adhered to a release liner, said supply roll being positioned generally medially of said upper portion and, a

stationary nose member mounted to said housing and having a rounded tip exposed outwardly of said housing and being disposed at a proximal end of said upper portion of said housing above said supply roll, press member positioned diametrically opposite and above said rounded tip and being vertically movable downwardly to force said exposed face side of said adhesive strip on said rounded tip into contact with a lower surface of a generally horizontally incoming cutting tape to cause said exposed face side to adhere to a lower surface of cutting tape and separate from a release liner when a release liner rotates around said tip.

19. The applicator of Claim 18 further including a rotatable nip roll spacedly positioned beneath said supply roll for pressing spent release liner onto said supply roll, a doctor knife edge positioned spacedly and adjacent said nip roll and beneath said supply roll for separating spent release liner from said exposed face sides of said strip around said supply roll while said nip roll presses against said supply roll.

20. The applicator of Claim 19 further including means for urging said doctor knife edge and said nip roll upwardly to press spent release liner onto said supply roll to aid rotation of said supply roll and to enable said doctor knife edge to separate spent release liner from said exposed face sides of said strip around said supply roll.

21. The applicator of Claim 19 further including a waste channel formed in a space between said doctor knife edge and said nip roll for receiving spent release liner and sending it to a waste zone.

22. The applicator of Claim 18 further including in combination an optical sensor positioned in proximity with and downstream from said stationary nose member for detecting presence or absence of adhesive on a lower surface of a generally horizontally exiting cutting tape, an upwardly movable abort block means positioned

adjacent said track, and a control for receiving output signals from said sensor and sending a signal to said abort block means to move upwardly to divert a cutting tape having no adhesive strip on its lower surface.

23. The applicator of Claim 18 wherein said press member is a rotatable press roll.

24. A method for applying a strip of double-sided pressure sensitive adhesive to a cutting tape surface, said method comprising the steps of:

A. rotating layers of spaced strips with exposed face sides and unexposed back sides with each side having a pressure sensitive adhesive thereon, the back side being adhered to a release liner, around a rounded tip of a stationary nose member;

B. pressing a lower surface of a generally horizontally incoming cutting tape into contact with the exposed face side of the adhesive strip on a rounded tip into contact to cause adherence to the lower surface of the cutting tape and separation from the release liner when the release liner sufficiently moves around the tip;

C. pushing the cutting tape in a generally horizontal direction to force a substantial portion of a facing side of the strip to adhere to the cutting tape;

D. ceasing step B; and

E. pushing the cutting tape in a generally horizontal direction to force the remainder of the face side of the strip to adhere to the cutting tape while advancing the spent release liner.

25. The method of Claim 24 further including the steps of:

F. pressing the spent release liner onto the supply roll to tension release liner around nose member providing a definitive path for the spent release liner;

G. separating the spent release liner from the exposed face sides of the strips around the supply roll;

H. urging a nip roll against the supply roll to maintain the spent release liner in contact with the supply roll; and

I. guiding the spent release liner into a waste zone.

26. The method of Claim 24 wherein step B includes the step of:

F. downwardly moving a pressing roll to force the lower surface of the generally horizontally incoming cutting tape into contact with the exposed face side of the adhesive strip on the rounded tip.

27. The method of Claim 25 wherein step F includes the step of:

J. upwardly moving a nip roll to press against the supply roll to assure rotation of the supply roll by movement of the spent release liner.

28. The method of Claim 25 wherein Step G includes the step of:

K. peeling the release liner from the exposed face sides of the strips around the supply roll by a doctor knife edge.

29. The method of Claim 25 further including the step of:

N. urging the doctor knife edge and the nip roll upwardly to press the spent release liner by the nip roll onto the supply roll to enable the doctor knife edge closely spaced to the supply roll to separate the spent release liner from the exposed face sides of the strips around the supply roll.

30. The method of Claim 24 further comprising the step of:

F. tensioning the spent release liner as it is moving about the nose member to separate the strip moving with the cutting tape from the spent release liner.